Maine Atlantic Salmon

Conservation Fund

Overview 2007

A program of the U.S. Fish and Wildlife Service Gulf of Maine Coastal Program and the National Fish and Wildlife Foundation in collaboration with NOAA Fisheries Service, the Maine Department of Marine Resources and other conservation partners.

INSIDE

The Maine Atlantic Salmon Conservation Fund supports efforts to recover wild Atlantic salmon by ensuring healthy watersheds and restoring other sea-run fish with which they are closely linked. This report summarizes MASCF's accomplishments to date and highlights the work of organizations that are making a difference today and for the future.

> "We simply cannot have salmon without healthy rivers. But it's not just the salmon that need healthy rivers. We do too."
>
> *– Jim Lichatowich,*
> Salmon Without Rivers

Contents

The Maine Atlantic Salmon Conservation Fund is committed to creating healthy rivers. From providing tools to help communities tackle difficult resource issues, to funding habitat protection and restoration projects, MASCF is making a visible difference. This overview profiles just a few of the 120-plus projects MASCF has supported since October, 2000. These projects, indicative of the breadth of MASCF's involvement, demonstrate how the fund is:

- **Building momentum for identifying and removing barriers that block access to historic habitat**
- **Assisting land trusts with engaging individual landowners**
- **Fostering communication and coordination with local communities**
- **Supporting a large scale effort to conserve habitat on the Machias River**

Atlantic salmon recovery is complex. There is no one answer, no silver bullet and no quick fix. However, we do know that in order to set the stage for recovery, communities and landowners in salmon watersheds have to be engaged. MASCF operates quietly in the background, providing technical support and critical funding that enables local conservation groups, private landowners, and agencies to implement projects that benefit salmon and other migratory fish like alewife, American shad, and American eel. The long-term solutions we facilitate today are critical to maintaining the healthy watersheds necessary for their very survival.

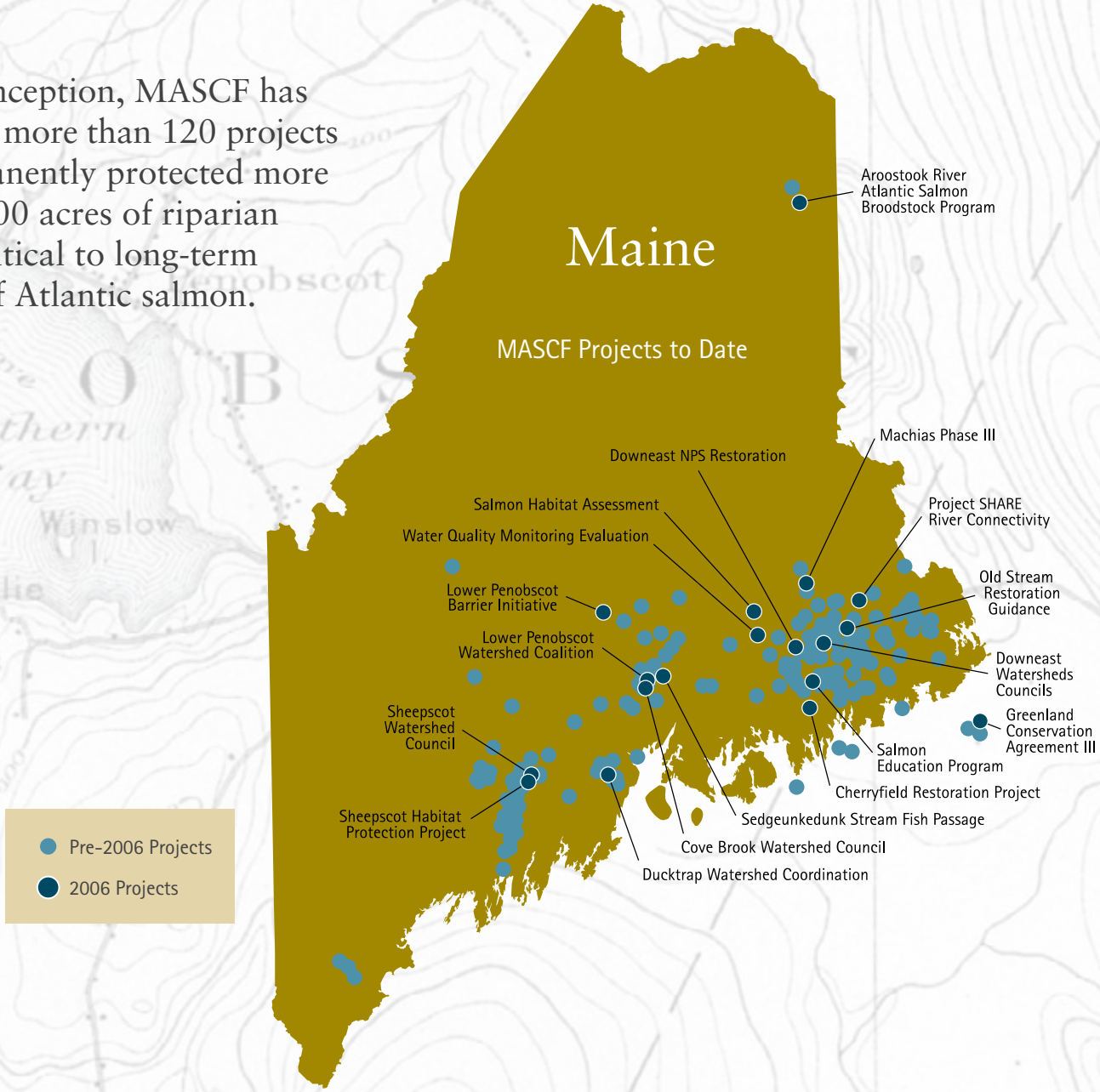
Thanks to funding provided by Maine's congressional delegation, the program is now in its seventh year. In this very short time, MASCF has helped protect over 81,000 acres of riparian habitat, opened up many miles of historic habitat where migration had been blocked and supported a growing public awareness of the issues facing salmon. This long-term commitment is critical to ensuring that both we and salmon have healthy rivers in our futures.

Sincerely,

Jed Wright, *U.S. Fish and Wildlife Service, Gulf of Maine Coastal Program*

Lynn Dwyer, *National Fish and Wildlife Foundation*

Since its inception, MASCF has supported more than 120 projects and permanently protected more than 81,000 acres of riparian habitat critical to long-term survival of Atlantic salmon.



The following conservation partners play a vital role in implementing MASCF funded projects:

ABG Consulting
Atlantic Salmon Federation
Boston College
BSA Environmental Consulting
Coastal Mountains Land Trust
Concepts of Place, Inc.
Cove Brook Watershed Council
Dartmouth College
Dennys River Watershed Council
Downeast Resource Conservation and Development Council
Downeast Rivers Land Trust
Downeast Salmon Federation
Ducktrap Coalition
East Machias River Watershed Council
Forest Society of Maine
International Paper, Inc.
Kennebec County Soil and Water Conservation District
Kleinschmidt Energy and Water Resource Consultants
Land for Maine's Future Board
Machias River Watershed Council
Maine Aquaculture Association
Maine Atlantic Salmon Commission
Maine Council of the Atlantic Salmon Federation
Maine Department of Conservation
Maine Department of Inland Fisheries and Wildlife
Maine Department of Transportation
Maine Department of Marine Resources
Maine Department of Environmental Protection
Maine Forest Service
Maine School Administrative District 64
MariCal, Inc.
Narraguagus River Watershed Council
National Academy of Sciences
Natural Resources Council of Maine
New England Forestry Foundation, Inc.
NOAA-Fisheries Services
Parish Geomorphic, Inc.
Penobscot River Restoration Trust
Pleasant River Watershed Council
Plymouth State University
Project SHARE
Quoddy Regional Land Trust
Saco River Salmon Club
Sheepscot River Watershed Council
Sheepscot Valley Conservation Association
The Nature Conservancy
Time and Tide RC&D
Town of Cherryfield
Trout Unlimited
U.S. Forest Service
University of Maine
Washington County Soil and Water Conservation District
Wild Blueberry Commission of Maine

MASCF Funding Supports Critical Barrier Assessment and Removal Initiatives

River connectivity has been identified as a critical issue for Atlantic salmon recovery. Salmon depend on unobstructed access to inland freshwater rivers and streams for spawning and juvenile rearing habitat, as well as a refuge for adults.

The scientific community suggests that removing barriers may offer a direct lifeline for Atlantic salmon, as well as to other co-evolved diadromous fishes (including American eel, alewives, blueback herring, American shad, rainbow smelt, striped bass, Sea-run brook trout, and sea lamprey) that were historically abundant and able to travel inland on the same rivers and streams. These fish likely provided important benefits to the Atlantic salmon population including becoming alternate prey for predators, a food source for juvenile and adult salmon, nutrient cycling that ensured healthy river conditions and habitat conditioning.

A recently published study co-authored by Rory Saunders and Michael A. Hachey of NOAA's National Marine Fisheries Service and the late Clem W. Fay, a fisheries manager of the Penobscot Nation, Department of Natural Resources proposes that, "restoring the co-evolved suite of diadromous fishes that sustain [the above] functions may be required for successful recovery of the last native Atlantic salmon populations in the United States."

Historical Abundance

Before the construction of dams in the 1800s and construction of extensive road networks over the last century, migrations of salmon and other diadromous fish extended to the headwaters of Maine's coastal watersheds except in cases where large natural waterfalls halted their progress. Historical records boast of prodigious catches of alewives, blueback herring and American shad. Before the construction of dams on the Penobscot in the 1830s, the combined total annual catch for Atlantic salmon, American shad and river herring was estimated at over 3 million fish. There are similar indications of historically abundant catches on the Kennebec (400,000 blueback herring in 1880), the Damariscotta River (2,472,000 alewives in 1896). In addition, in the mid- to late 1800s, the rainbow smelt fishery was the second most important fishery in the Penobscot River.[1]

Precipitous Population Decline

Many diadromous fishes in Maine are at or near historic lows and some, including salmon, are currently listed or being considered for listing under the Endangered Species Act. Other species, while not listed as endangered or threatened, are well below historic levels. The cumulative effect is the near elimination of species that likely provided several important benefits to the Atlantic salmon population in Maine.

The study by Saunders and his team finds it likely that the sheer numbers of alewives, blueback herring, American shad, American eel, rainbow smelt and sea lamprey that shared waterways with Atlantic salmon provided an important (and alternative) food source for double-crested cormorants, river otters, mergansers, great blue heron, mink and ospreys.

In addition, juvenile alewives and other small diadromous fish are a significant food resource for Atlantic salmon in most of their life stages. For example, studies have shown that rainbow smelt are important forage for Atlantic salmon kelts shortly after ice out. Broad declines in rainbow smelt populations may partially account for the decline in repeat spawners in Maine Rivers.

The Impact of Dams and Culverts

The impact of dams and culverts on the migration of Atlantic salmon and other diadromous fish is extreme. While dam removals (and to a less successful extent fish ladders) have been used to improve river connectivity for salmon and other diadromous fish, studying the impact of corrugated metal pipes (CMPs) and slip liners has only recently been the focus of concern. Improperly installed culverts and the use of slip liners are often significant impediments to fish passage.

Improperly installed culverts are often significant impediments to fish passage.

The use of CMPs and slip liners is widespread throughout North America, primarily because they are less expensive to install than bridges. A recent study by the U.S. General Accounting Office notes that on Bureau of Land Management and U.S. Forest Service lands in Oregon and Washington over 10,000 CMPs exist on fish bearing streams. Assessments on Forest Service lands in these two states found that 80% of the CMPs are barriers to salmon migration. Closer to home, an inventory conducted in the Ashuelot River watershed in New Hampshire found that 82% of road crossings and dams were barriers to fish passage. In Maine, where road crossings on diadromous fish streams are numerous, it is not hard to imagine that a similar scenario is occurring.

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MASCF is funding surveys of over 1,000 culverts and other barriers in the Lower Penobscot River watershed.

Improperly installed culverts and the use of slip liners are often an impediment to fish passage. Canada's Department of Fisheries and Oceans advises that the best way to maintain the natural bottom substrate and hydraulic capacity of waterways is to avoid CMPs and slip liners altogether and to install open bottom arch culverts instead. However, if CMPs are to be used, they should be countersunk so that 20-40% of the culvert is below the existing stream bed. This allows the bottom structure to provide oxygen and cover for migrating fish.

Of major concern is the effect that CMPs and slip liners have on small brooks and streams that are critical to the rearing of juvenile salmon. Juveniles often travel upstream and downstream of spawning habitat, presumably to avoid predation by larger fish and to take advantage of richer feeding opportunities. This means that the impact of culverts is truly widespread.

The good news is that a number of studies have shown that salmon parr will colonize streams very quickly after a poorly installed culvert is removed or replaced to allow upstream access.

The Maine Atlantic Salmon Conservation Fund is supporting efforts to assess and prioritize sites to improve fish passage on our streams and rivers. In the lower Penobscot River watershed, volunteers and professionals, in partnership with state and federal agencies and non-governmental organizations, are currently surveying approximately 1,000 culverts at road-stream crossings and small and remnant dams in the watershed.

Maine Forest Service forest technicians have been diligently at work this summer collecting this data with guidance and assistance from the USFWS Gulf of Maine Coastal Program. Coastal Program staff and associated contractors have developed statewide barrier inventory protocols that are using Geographic Information Systems (GIS) to prioritize barriers for removal.

"We are very pleased to partner with this effort that recognizes these diadromous fish are indeed forest dwelling species," says Chris Martin, Water Resource Forester for the Department of Conservation's Maine Forest Service. "Aquatic life thrives in healthy watersheds where forest cover predominates. Road stream crossing inventories and assessments fit our core mission of encouraging landowners and municipalities to practice responsible land management including forest access road design and construction."

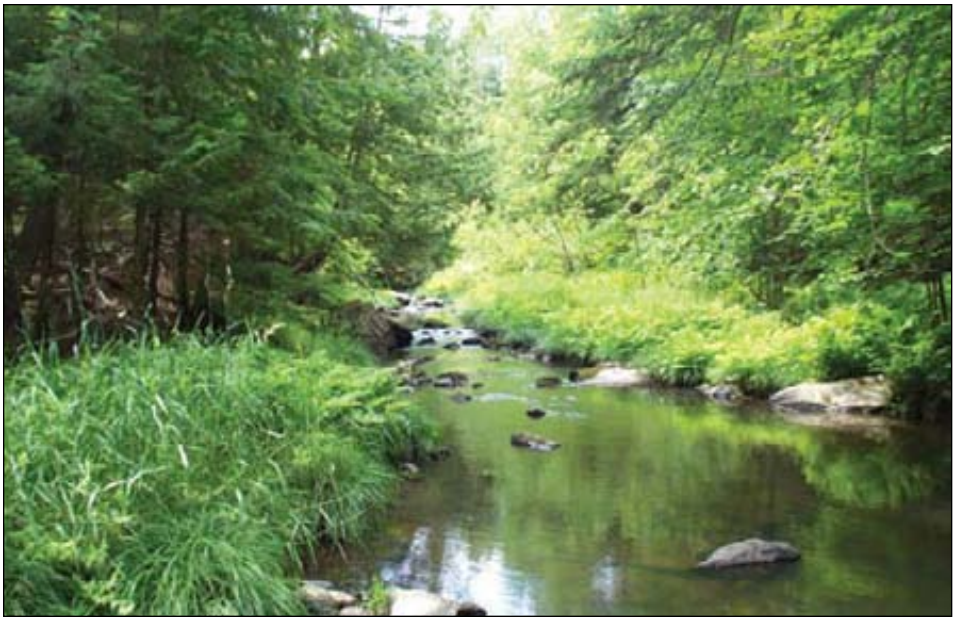
The lower Penobscot River is home to twelve diadromous fish species, as well as numerous resident freshwater species. In addition to surveying stream road crossings, the project is also inventorying many small dams. Crews are also conducting comprehensive surveys in three small drainages within the project area to develop a more complete understanding of passage problems. Collecting this information will help towns and state agencies most effectively prioritize and replace structures to improve fish passage. It will also help to direct private, state or federal funding towards high priority crossings so that they meet current standards for effective fish passage, or make modifications to allow fish to pass dams that otherwise act as barriers.

In many cases, even crossings that were once effective are now barriers because of stream erosion or mechanical breakdown.

The Penobscot River Barrier Assessment and Restoration Initiative is part of a larger statewide effort to inventory and remove barriers to diadromous fish such as Atlantic salmon, alewives, American shad, American eel, and other species that may be critical to the survival of the Atlantic salmon. For example, in downeast Maine, the fund is supporting groups like Project SHARE to replace or remove culverts that are barriers. "These efforts are starting with the low hanging fruit, and MASCF is also helping us to develop a strategic approach to improving fish passage.With limited resources, this strategic approach is critical," says Pat Keliher, Director, Bureau of Sea-Run Fisheries & Habitat, Maine Department of Marine Resources. The Maine Atlantic Salmon Conservation Fund is pleased to support these vital efforts that may lead to the species' ultimate survival.

Illustration: Joe Tomelleri

[1] "Maine's Diadromous Fish Community: Past, Present and Implications for Atlantic Salmon Recovery", Fisheries, Vol 31 No. 11, November, 2006.



Funding from MASCF has given momentum to the Lower Penobscot Watershed Coalition, ensuring that public and private funds are spent most effectively to protect and improve conditions in the watershed.

OUTREACH AND EDUCATION

Cove Brook Watershed Council Initiative Strengthens Community Approach

The Cove Brook Watershed Council has developed a strategic plan and employed a full-time coordinator thanks to funding received from the Maine Atlantic Salmon Conservation Fund.

During the creation of their strategic plan, the organization identified an opportunity to expand their role to include coordinating efforts in the lower Penobscot River watershed, home to twelve diadromous fish species, as well as numerous freshwater species.

In just the first year and a half, the organization, largely through the efforts of the paid coordinator, has formed a coalition of towns, cities and organizations dedicated to promoting a regional perspective for stewardship in the lower Penobscot River watershed.

So far, the Lower Penobscot Watershed Coalition has held meetings in Bangor, Orono and Stockton Springs and more have been scheduled. These meetings have galvanized support for the protection of the watershed, allowed groups to coordinate efforts to reduce redundancy and ensure that federal and private funds are used most effectively in protecting and improving the watershed's tributaries, streams and surroundings.

"The paid coordinator position has made it possible to bring organizations, individuals and municipalities together, most effectively", says Gayle B. Zydlewski, President of the Cove Brook Watershed Council, and Coordinator of the Lower Penobscot Watershed Coalition. "The ability to travel to small municipalities and meet with town officials has made a huge difference, particularly since many of them don't have the budget or time allocated to travel to meetings. Their involvement in protecting the watershed is largely due to the fact that we have a paid coordinator position, and we couldn't have done it without funding from MASCF."

In just the first year and a half, the organization, largely through the efforts of the paid coordinator, has formed a coalition of towns, cities and organizations dedicated to improving the water quality of the watershed.

The purchase of 40-acres abutting both sides of Trout Brook, a stream with high quality salmon habitat located in Head Tide, Maine, was made possible with funding from MASCF.

"These purchases could only have happened with the help of MASCF… this federal funding not only made an immediate impact, in terms of securing the Tornell properties as they became available, but gave our organization the visibility and strength to attract local donors."

Maureen Hoffman
Executive Director of the SVCA

OUTREACH & EDUCATION

Sheepscot Valley Conservation Association Acquires Key Parcel

A rare opportunity to protect both sides of a stream of critical importance to Atlantic salmon has come to fruition with the purchase of a 40-acre parcel by the Sheepscot Valley Conservation Association.

The acquisition, the third in three years by the SVCA, ensures that the former Tornell Farm, which abuts Trout Brook on both shores, will continue to provide a protective conservation buffer.

The purchase was the culmination of many years of informal discussions between the SVCA and the landowner, who sold the property at the below market value to ensure that it would retain it's rural character for walking and other low impact activities. The SVCA plans to protect habitat and establish walking trails for recreational access.

The Tornell Property acquisition is the latest in a series of notable accomplishments by the SVCA. In 2005, the organization bought an 18-acre parcel of property with 2300' of frontage on the Sheepscot. In 2006, SVCA was able to secure the first Tornell parcel, 68-acres with 5000' of frontage on Trout Brook. In 2006, the other side of the brook became a protected area when the organization purchased a 40-acre parcel, also with 5000' frontage.

"These purchases could only have happened with the help of MASCF", says Maureen Hoffman, Executive Director of the SVCA. "This federal funding made an immediate impact, in terms of securing the Tornell properties as they became available, and gave our organization the visibility and strength to attract local donors."

In the past five years, the SVCA has protected 15 projects with over 700 acres and seven miles of riverfront on the river with support from MASCF.

HABITAT PROTECTION

Machias River Project Provides Protection and Access

The Machias River Project continues to enjoy success as a landscape-scale project that protects habitat for the Atlantic salmon, thanks to the efforts of local and national conservation organizations and with substantial financial support from MASCF.

When this historic project is completed later in 2007, 66,024 acres will be protected by conservation purchases and conservation easements, including 312 miles of lake, river and stream shoreline. The project connects with other state and private conservation lands, creating a total protected landscape of 452,200 acres. These ecologically and economically significant lands and waters are protected through ecological reserves, stream and lakeside buffers and sustainably managed forestlands. They will remain open to public access for such uses as hunting, fishing, snowmobiling, paddling and hiking.

The Machias River watershed is home to numerous species, including the federally listed endangered Atlantic salmon. With hundreds of miles of tributaries, the watershed provides a diversity of fish habitats, ranging from slow warm-water reaches to confined, cold-water streams with riffles and pools.

To support salmon, water must be clean and cold. Intact forest cover is essential to protecting water quality. The many streams that drain from forestlands and enter the Machias River and its headwater lakes benefit from the innovative riparian protection guidelines originally developed a decade ago by Champion Paper Co. and endorsed and followed by subsequent owners.

The Machias River Project Phases I and II strengthened the existing land practices by permanently establishing 1000-foot buffers on the Machias River and the lakes that feed it. The Maine Atlantic Salmon Conservation Fund provided more than $1.2 million to these two initial phases of the project.

The Machias River Project Phase III: *Washington Bald Mountain and Wabassus Lake Project*, also supported by MASCF, will increase the permanent forest protection in upper portions of the watershed. The easement protects riparian habitat along more than 42 stream miles in 16 tributary streams that drain into Fifth, Fourth, Third, and Second Machias Lakes or flow directly into the mainstem of the Machias River.

The Wabassus Lake portion of the project includes over 9 miles of undeveloped lakeshore on Wabassus Lake and the Getchell Pugs, and 3 miles of streams in the St. Croix River watershed. Development of these lands or degradation of riparian buffers along these shorelines could significantly degrade habitat and water quality.

The Machias River Project Phase III completes a major collaborative conservation effort between the state of Maine and many conservation organizations. Phase III protects gaps remaining between the existing conservation lands and secures a contiguous expanse of 452,200 acres in Maine that connects with another 840,418 acres of managed Crown Lands in Canada.

This historic agreement will protect wildlife, and ensure access for popular recreational uses of these lands. The Machias River Project Phase III will add permanent public access to almost 34,000 acres, including a popular hiking trail on Washington Bald Mountain, and undeveloped lakeshores on Wabassus Lake and the Getchell Pugs. It will guarantee hunting, trapping, and fishing opportunities and safeguard an existing snowmobile trail. The easements created in the development of the Machias River Plan will ensure that these pristine forestlands are open to the public forever. By adding 33,812 acres of working forest in conservation easements, the project lands create a vast landscape of protected working forests in Maine. Maintaining a sustainable flow of forest products will contribute to the economic stability of the local, regional and national economy.

There is significant interest in ensuring that the Machias River Project's landscape scale vision continues. The landowner of the Washington Bald tract has indicated a willingness to consider a much larger easement sale on unfragmented backcountry lands, linking the already extensive Downeast region conservation lands directly to the Lower Penobscot Forest and Sunkhaze Meadows National Wildlife Refuge, protecting a forested landscape that stretches from the Bangor-Brewer-Orono population center over 100 miles east into New Brunswick.

Since its inception, MASCF has supported more than 120 projects and permanently protected more than 81,000 acres of riparian habitat critical to long-term survival of Atlantic salmon. MASCF has provided more than $11.6 million in federal funds and leveraged an additional $14.7 million for conservation activities promoting Atlantic salmon recovery.

In 2006, the Maine Atlantic Salmon Conservation Fund awarded $100,000 to the third phase of the Machias River Project to help ensure that this historic partnership between private conservation organizations, community groups, private industry and state and federal agencies is successful.

"From its inception, the Machias River project has been a shared vision between local residents, industry, government and private partners," said Michael Tetreault, executive director of the The Nature Conservancy in Maine. "This collaborative effort is successfully protecting the ecological, recreational and economic value of an outstanding river system and its watershed. The significant support from NFWF and Maine Atlantic Salmon Conversation Fund has been essential to our success."

Cherryfield Site Restoration Sunrise County Economic Council

Washington County, Maine

Award: $5000
Proposed Matching Funds: $65,400

Objective:

Eliminate contaminated soils, hazardous building materials, and an illegal overboard discharge from a commercial property located immediately adjacent to the Narraguagus River to significantly reduce or eliminate the leaching of gasoline and diesel components into the water.

Greenland Conservation Agreement

Atlantic Salmon Federation

Award: $75,000
Proposed Matching Funds: $270,000

Objective:

Fulfill the 5th and final year of a Conservation Agreement with Greenland to help limit impacts on for wild Atlantic salmon. The Agreement will identify and promote alternative sustainable fisheries and economic development programs for Greenland fishermen in order to increase the number of Atlantic salmon returning to North America in future years.

Downeast Maine Watersheds Community Outreach II

Washington County Soil & Water Conservation District, Maine

Award: $75,000
Proposed Matching Funds: $111,900

Objective:

To continue to expand upon successful outreach programs and activities that focus on increasing watershed stewardship and community support for ongoing Atlantic salmon recovery efforts in the five DPS watersheds in coastal Washington County, Maine.

Sedgeunkedunk Stream Fish Habitat Enhancement

Aquatic Science Associates, Maine

Award: $21,500
Proposed Matching Funds: $22,000

Objective:

Provide project management services facilitating the planning and development of fish passage for the Meadow Dam on Sedgeunkedunk Stream. The project will identify a solution that addresses fish and wildlife habitat needs, public and private property interests, local recreation needs, and other local stakeholder interest in portions of the watershed under the influence of the Meadow Dam.

Project SHARE Atlantic Salmon DPS Watershed Connectivity Restoration— Outreach, Management and Technical Support

Project SHARE, Maine

Award: $59,300
Proposed Matching Funds: $59,300

Objective:

To restore watershed process, connectivity and fish passage in sub-watershed priority focus areas in the Downeast Atlantic Salmon DPS Rivers. Funding will be used to support continued landowner outreach, site plan development, project management and post construction monitoring.

Sheepscot River Watershed Council Public Outreach

Sheepscot River Watershed Council, Maine

Award: $25,000
Proposed Matching Funds: $43,000
Total Grant: $69,000

Objective:

Provide support for the Sheepscot River Watershed Council (SRWC) to better fulfill its mission, including protection and restoration of endangered Maine Atlantic salmon habitat including expanding stakeholder participation and coordinate conservation efforts of key agencies and NGO's that rely on SRWC assistance.

Habitat Restoration and Downeast NPS Restoration

Washington County Soil & Water Conservation District, Maine

Award: $142,700
Proposed Matching Funds: $142,700

Objective:

Continued technical and capacity support for on the ground Atlantic salmon habitat restoration activities to provide technical assistance to Project SHARE, Washington County Soil & Water Conservation District, watershed councils, landowners and other conservation groups that is specifically focused on improvements to Atlantic salmon habitat in the five Downeast DPS rivers.

Increasing Awareness of Cove Brook and the Importance of the Lower Penobscot River in Salmon Restoration Activities

Cove Brook Watershed Council, Maine

Award: $25,000
Proposed Matching Funds: $54,500

Objective:

Increase awareness of Cove Brook and its associated ecosystem while enhancing the visibility of the Council. The coalition will work closely with the Maine Atlantic Salmon Commission (MASC) and other partners to restore and protect the Lower Penobscot's historic population of Atlantic salmon, and act as a guardian of overall watershed health.

Old Stream Guidance for NPWS Restoration Projects in Priority Subwatershed in Downeast Maine

PARISH Geomorphic, Maine

Award: $31,300
Proposed Matching Funds: $30,040

Objective:

Produce a guidance document that can be used to help prioritize and evaluate NPS, stream restoration and land protection projects in the uppermost watershed of the federally listed Atlantic salmon (Salmo slar) rivers in Downeast Maine. Capitalize on an ongoing and unique private landowner initiative occurring in collaboration with Project SHARE to remove or improve approximately 90% of the stream crossings in the upper watershed of the Old Stream, a major tributary to the Machias River system.

Ducktrap Coalition Coordination and Riparian Land Conservation and Rehabilitation

Coastal Mountains Land Trust, Maine

Award: $18,680
Proposed Matching Funds: $27,410

Objective:

Coordinate the conservation programs of the Ducktrap Coalition and the watershed council for the Ducktrap River Watershed, with a focus on three core activities: education and outreach to land owners of the watershed, municipalities and the general public; riparian land conservation; and ecological rehabilitation of degraded riparian habitats.

Aroostook River Atlantic Salmon Enhancement

Atlantic Salmon for Northern Maine

Award: $27,300
Proposed Matching Funds: $56,500

Objective:

Develop and implement a captive reared broodstock program for Atlantic salmon enhancement and research purposes in the Aroostook River, Maine. The Canadian Department of Fisheries and Oceans (DFO) will be contracted to rear captive broodstock to produce salmon eggs which will be imported, incubated, and hatched by the Atlantic Salmon for Northern Maine (ASNM) at their privately owned and operated fish hatchery in Sheridan, Maine. The fry will be stocked into the Aroostook River immediately post hatch under the direction of the Maine Atlantic Salmon Commission (MASC), who will also evaluate post stocking fry performance.

SVCA Salmon Habitat Protection and Water Quality Monitoring Programs

Sheepscot Valley Conservation Association, Maine

Award: $172,000
Proposed Matching Funds: $208,500

Objective:

Provide the acquisition costs associated with the purchase and protection of three important properties fronting salmon habitat, and provide a portion of the 2007 salary and transaction costs associated with the protection of these and other ongoing salmon habitat protection projects. Provide for the 13th year, the collection of data on water quality indicators important to salmon and to inform salmon habitat protection and restoration throughout the watershed.

Evaluation of the Maine Atlantic Salmon Water Quality Monitoring Planning Initiative

BSA Environmental Consulting, Maine

Award: $3,000
Proposed Matching Funds: $5,000

Objective:

The Maine Atlantic Salmon Rivers Water Quality Monitoring Planning Initiative has produced three plans for the coordinated and organized review of WQ data and development of recommendations for future monitoring (Sheepscot, 2004-05, Narraguagus 2006, and Pleasant 2006-07). The success of these plans depends on continued review, evaluation, updating, and implementation. Therefore, BSA Environmental Consulting, in cooperation with government agencies and conservation organizations, will conduct a review, evaluation, and updating of the existing plans and each agency's WQM program starting in September 2007.

Atlantic Salmon Passage Assessment and Prioritization Program

Maine Forest Service, Department of Conservation

Award: $64,000
Proposed Matching Funds: $33,000

Objective:

Thousands of barriers across Maine block passage to upstream Atlantic salmon habitat and restrict downstream flows of sediment and large woody debris. This project will identify and prioritize fish passage barriers in Penobscot River sub watersheds. In addition, the project will provide training to local municipalities and state agencies on techniques to improve passage at these sites.

Machias River Project Phase III

Maine Bureau of Parks and Lands

Award: $100,000
Proposed Matching Funds: $250,000

Objective:

This 27,164 acre working forest easement will build directly upon the success of Phases I and II and on other significant federal, state and private conservation investments in Downeast Maine. By bringing cumulative protection to more than 80 percent of the upper Machias watershed, Phase III anchors over 440,000 acres of conservation land encompassing important Atlantic salmon habitat. The broad partnership supporting this project through phase I, II, and III has won two federal awards, the Wings Across the Americas Award (Forest Service 2006) and the National Wetland Group Award (USFWS 2004).

MASCF funding supports historic partnerships between private conservation organizations, community groups, private industry and state and federal agencies.

Atlantic Salmon Habitat Restoration Prioritization Project

Atlantic Salmon Federation

Award: $100,000
Proposed Matching Funds: $20,000

Objective:

This project is developing tools to examine the impact of specific restoration actions on Atlantic salmon populations. These tools will provide a mechanism to review and prioritize recovery activities throughout the DPS by answering the following important questions:

- ***What restoration actions are necessary to restore habitat availability, quality, and diversity?***
- ***Which restored habitats will most improve biological populations, communities, or ecosystems?***

MASCF funding supports outreach programs and activities that focus on increasing stewardship and community support for ongoing Atlantic salmon recovery efforts.

2005 PROJECTS

Agriculture
Sustainable Agriculture Water Management II

Assessment
Sheepscot River Watershed
Kris Development III Sheepscot River
Thermal Imaging Survey
Midcoast Maine Conservation Tools Assessment
Salmon Habitat Sediment Transport Analysis
Pleasant River Water Quality Monitoring Plan
Migration Study of Penobscot Salmon Smolts II
Pushaw Lake Northern Pike Assessment

Education and Outreach
North American Salmonid Exchange II
Atlantic Salmon Planning and Outreach II
Community Salmon Recovery
Capacity Building Downeast Maine Watersheds
Community Outreach
Sheepscot River Watershed Outreach
Ducktrap Coalition Outreach and Coordination II
Cove Brook Watershed Outreach and Education

Habitat Protection
Sheepscot Salmon Habitat Protection Program III
Downeast Maine Salmon Habitat Protection Planning

Habitat Restoration
Penobscot River Fish Passage Restoration
Downeast Maine Riparian Buffer Revegetation
Maine Fish Passage Cost-Share Program
Salmon Habitat Restoration Technical Support

Other
Aroostock River Atlantic Salmon Broodstock Program
Greenland Conservation Agreement II

2004 PROJECTS

Aquaculture
Salmon Conservation Education Program

Assessment
Assessing Large Woody Debris for Salmon
Crooked River Water Quality Mitigation
Migration Study of Penobscot Salmon Smolts
Narraguagus Water Quality Monitoring Plan
Road Salting Impacts on Atlantic Salmon
Sheepscot Water Quality Monitoring Plan II
Systematic Chemistry Survey of Salmon Rivers

Capacity Building
Machias/East Machias Rivers Coordinator III
Sheepscot Salmon Habitat Protection Program II
Sustainability Workshop for MASCF Partners

Education and Outreach
Atlantic Salmon Education Initiative IV
Ducktrap Coalition Outreach and Coordination
Kenduskeag Salmon Recovery
Kennebec River Restoration Outreach
North American Salmonid Exchange
Sheepscot River Watershed KRIS Development II

Habitat Protection
Atlantic Salmon Conservation Initiative III
Atlantic Salmon Lands Stewardship
Atlantic Salmon Lands Protection III
Downeast Lakes Acquisition
Drucker Property Acquisition
Machias River Acquisition II
Plains Lot Acquisition

Habitat Restoration
Penobscot River Agreement

2003 PROJECTS

Assessment
Demonstration Project for Use of SuperSmolt
Fluvial Habitat Assessment of the Kennebec River
Improving Road Maintenance to Benefit Salmon
Sheepscot River Comprehensive Plan
West Branch Sheepscot Geomorphic Assessment

Capacity Building
Atlantic Salmon Planning and Outreach
Machias/East Machias Rivers Coordinator II
Narraguagus River Watershed Coordinator
Needs Analysis for Sustainable Watershed Councils
Pleasant River Watershed Coordinator

Education and Outreach
Atlantic Salmon Education Initiative III
Sheepscot River Watershed KRIS Development
Watershed: A Book on the Sheepscot Watershed
Watershed Habitat Features Assessment
Volunteer Water Quality Monitoring Program

Habitat Protection
Atlantic Salmon Conservation Initiative II
Atlantic Salmon Lands Protection II
Gardner Easement Acquisition
Great Falls Acquisition
Lawrence Parcel Acquisition
Machias Wigwams Acquisition
Sheepscot Salmon Habitat Protection Program
Spring River/Haynes Acquisition

Habitat Restoration
Downeast NPS Site Stabilization
Kenduskeag Stream Restoration

Other
Greenland Conservation Agreement

2002 PROJECTS

Assessment
Sheepscot River Water Quality Monitoring Plan

Capacity Building
Dennys River Watershed Capacity Building
Downeast Salmon Federation Capacity Expansion
Ducktrap River Protection and Stewardship
Machias/East Machias Rivers Coordinator
Maine Atlantic Salmon Habitat Mapping
Narraguagus River Watershed Capacity Building
Pleasant River Watershed Capacity Building
Sheepscot River Stewardship

Education and Outreach
Atlantic Salmon Education Expansion in Maine-II
Downeast River Newsletter
Palermo Salmon Reserve Outdoor Classroom
Sheepscot Watershed Book

Habitat Protection
Atlantic Salmon Lands Protection
Cove Brook Acquisition
Dennys River Preston Property Acquisition
East Shore-Palermo Salmon Reserve
Gilman Dam Acquisition
Lamont Property Acquisition
Machias River Conservation Easements
Pleasant River Howe Conservation Easements
Saco Falls Pleasant River Conservation
Sheepscot River Palermo Salmon Reserve
Stewardship Development

Habitat Restoration
Dearborn Brook Restoration
Dennys River Watershed Restoration
Machias River Non-Point Source Database
Machias River Watershed Restoration
Sennebec Dam Removal

2001 PROJECTS

Agriculture
Sustainable Agriculture Water Management in Maine
Wyman Water Use Plan and Dissemination

Aquaculture
Aquaculture Containment Verification System

Assessment
Atlantic Salmon Status and Future Analysis
Habitat Mapping Projects
Saco River Salmon Club Fisheries Restoration Project

Education and Outreach
Atlantic Salmon Education Expansion in Maine
SVCA Habitat Workshop

Habitat Protection
Beaverdam Stream Parcel Habitat Protection Project
Dennys River Corridor Project
Dixon Parcel Habitat Protection Project
Drisko Parcel Habitat Protection Project
Dunton Parcel Habitat Protection Project
East Ridge Habitat Protection Project
Happy Farm Habitat Protection Project
LTA Assessment Project
Pottle Parcel Habitat Protection Project
QRLT Robinson Habitat Protection Project
Quoddy II Habitat Protection Project
Sheepscot Biddle Parcel Habitat Protection Project
Sheepscot Habitat Protection Specialist
Sheepscot Barth Parcel Habitat Protection Project
Sinclair Barrens Habitat Protection Project
Tierney Parcel Habitat Protection Project

Habitat Restoration
Coopers Mills Dam Fire Control and Fishway Project
Ducktrap Rt. 52 Habitat Protection Project
Munson Rips Bridge Project
Narraguagus Salt and Sand Abatement Project
Sennebec Dam Removal Project
West Winterport Fish Passage Project
Regional Hydraulic Geometry Curve

About the Maine Atlantic Salmon Conservation Fund

Since its inception in October 2000, the Maine Atlantic Salmon Conservation Fund (MASCF) has supported over 120 Atlantic salmon recovery projects that protect over 81,000 acres of riparian habitat and restore access to many miles of historic salmon habitat.

The program's efforts include in-stream and riverine restoration, habitat protection, watershed management and organizational capacity building, water quality enhancement and monitoring, projects that remove direct threats to wild salmon and their habitat, and applied research to enhance salmon conservation efforts. MASCF also assists agriculture and aquaculture industries to develop practices that minimize impacts to wild salmon.

While the program has leveraged over $14.7 million in private funding for salmon conservation efforts, MASCF provides more than financial support for implementing conservation projects. MASCF is a vehicle for building partnerships and stimulating salmon recovery throughout Maine. Grants made through MASCF have helped promote collaboration among federal and state agencies, industry, private landowners, local watershed councils, academics, and conservation groups. The National Fish and Wildlife Foundation and the U.S. Fish and Wildlife Service Gulf of Maine Coastal Program administer the program in partnership with the Atlantic Salmon Federation, NOAA Fisheries Service, the Maine Department of Marine Resources, the Maine State Planning Office—Land for Maine's Future Program, the University of Maine at Machias, the Wild Blueberry Commission, and local conservation groups.

In FY07, as a result of the federal appropriations process, MASCF funding is being managed by the U.S. Fish and Wildlife Service Gulf of Maine Coastal Program.

For more information about MASCF, visit: **http://www.fws.gov/northeast/gulfofmaine/grants/mascf.htm**